Title (en)

INCREASED DATA STORAGE IN OPTICAL DATA STORAGE AND RETRIEVAL SYSTEMS USING BLUE LASERS AND/OR PLASMON LENSES

Title (de)

VERBESSERTE DATENSPEICHERUNG IN OPTISCHEN DATENSPEICHER- UND ABRUFSYSTEMEN MIT BLAUEN LASERN UND/ODER PLASMON-LINSEN

Title (fr)

STOCKAGE DE DONNEES AUGMENTE DANS UNE MEMOIRE OPTIQUE ET SYSTEMES DE RECUPERATION FAISANT APPEL A DES LASERS BLEUS ET/OU DES LENTILLES A PLASMONS

Publication

EP 1428212 A4 20080109 (EN)

Application

EP 02759498 A 20020830

Priority

- US 0227613 W 20020830
- US 31656601 P 20010901

Abstract (en)

[origin: US2003048744A1] An optical recording medium includes a crystallizing layer for enhancing the crystallization of a phase change memory layer, an energy storage layer for aiding the state transformations of a phase change memory layer, and/or a modifying element for increasing absorption and contrast at short wavelengths. An optical data storage and retrieval system containing same. Also a light-plasmon coupling lens including an optically transparent substrate having a light incident surface and a light-plasmon coupling surface opposite the light incident surface. The light-plasmon coupling surface including at least a set of circular concentric peaks/valleys which form a Fourier sinusoidal pattern in the radial direction of the circular concentric peaks/valleys. A conformal layer of metal is deposited on the light-plasmon coupling surface of the substrate and has aperture at the center of thereof through which plasmons are transmitted.

IPC 1-7

G11B 7/24

IPC 8 full level

G11B 5/58 (2006.01); **G11B 7/00** (2006.01); **G11B 7/004** (2006.01); **G11B 7/0045** (2006.01); **G11B 7/0055** (2006.01); **G11B 7/006** (2006.01); **G11B 7/09** (2006.01); **G11B 7/095** (2006.01); **G11B 7/125** (2012.01); **G11B 7/135** (2012.01); **G11B 7/243** (2013.01); **G11B 7/251** (2006.01); **G11B 7/257** (2013.01); **G11B 11/03** (2006.01); **G11B 11/105** (2006.01); **G11B 11/11** (2006.01); **G11B 11/115** (2006.01); **G11B 11/12** (2006.01); **G11B 15/04** (2006.01); **G11B 19/04** (2006.01); **G11B 20/18** (2006.01); **G11B 27/36** (2006.01)

CPC (source: EP US)

B82Y 10/00 (2013.01 - EP US); **G11B 7/00454** (2013.01 - EP US); **G11B 7/00557** (2013.01 - EP US); **G11B 7/006** (2013.01 - EP US); **G11B 7/1275** (2013.01 - EP US); **G11B 7/1374** (2013.01 - EP US); **G11B 7/1387** (2013.01 - EP US); **G11B 7/24065** (2013.01 - EP US); **G11B 7/243** (2013.01 - EP US); **G11B 7/2433** (2013.01 - EP US); **G11B 7/251** (2013.01 - EP US); **G11B 7/257** (2013.01 - EP US); G11B 7/252 (2013.01 - EP US); G11B 7/2531 (2013.01 - EP US); G11B 7/2534 (2013.01 - EP US); G11B 7/2585 (2013.01 - EP US); G11B 7/259 (2013.01 - EP US); G11B 2007/24308 (2013.01 - EP US); G11B 2007/2431 (2013.01 - EP US); G11B 2007/24312 (2013.01 - EP US); G11B 2007/24314 (2013.01 - EP US); G11B 2007/24316 (2013.01 - EP US)

Citation (search report)

- [X] US 5278011 A 19940111 - YAMADA NOBORU [JP], et al
- See references of WO 03021589A1

Citation (examination)

US 5912104 A 19990615 - HIROTSUNE AKEMI [JP], et al

Designated contracting state (EPC)

DE FR GB NL

DOCDB simple family (publication)

US 2003048744 A1 20030313; **US 7113474 B2 20060926**; EP 1428212 A1 20040616; EP 1428212 A4 20080109; EP 2112659 A1 20091028; JP 2005502155 A 20050120; JP 2008234826 A 20081002; JP 4214055 B2 20090128; TW 200601324 A 20060101; TW I254299 B 20060501; TW I277087 B 20070321; US 2006245333 A1 20061102; US 2006280043 A1 20061214; US 7292521 B2 20071106; US 7388825 B2 20080617; WO 03021589 A1 20030313

DOCDB simple family (application)

US 23235502 A 20020830; EP 02759498 A 20020830; EP 09167597 A 20020830; JP 2003525849 A 20020830; JP 2008048543 A 20080228; TW 91119980 A 20020902; TW 94115315 A 20020902; US 0227613 W 20020830; US 47770406 A 20060629; US 47800806 A 20060629